

Remarks

The above preliminary amendment is made to cancel claims 1-23 and to add new claims 24-44. In addition, the preliminary amendment was made to replace the first paragraph of the specification to reflect current priority information.

The present application is a National Stage application of PCT/US 2004/010284. A Search Report and Written Opinion had been provided by the PCT on November 4, 2004. In that report all then-pending claims had been recognized as novel. However, the PCT International Search Authority asserted that the claims lacked inventive step. The primary art cited was EP 0 451 554 A1 (National Starch) and EP 1 036 585 (Donaldson Company). The Donaldson Company patent (D2) was primarily cited for separator features and a glass fiber media stage.

The PCT examiner 's position was that the beater deposition technique described in D1 was such that it would be obvious to apply it in a separator having a glass fiber media stage as disclosed in D2.

The independent claims now pending are the same as the independent claims pending before the PCT except each has been amended to have a specific reference to a thickness of at least 12.7 mm in the media. With respect to this limitation, the Examiner's attention is directed to original specification at page 4, line 9.

The Applicant's techniques are concerned with the formation of media that is relatively thick (for example at least about 1/2 inch or 12.7 mm thick), with the resin distributed throughout the media and with an aqueous process that does not lead to migration of the resin to an outer surface of the media during drying of the aqueous resin. Undesirable resin migration is controlled, through utilization of an appropriate inorganic agent in the system. Certain preferred resins were also identified.

The National Starch reference, EP 0 451 554 A1, is concerned generally with the preparation of sheets of non-woven composites through wet laid techniques. The types of arrangements described in the reference, are relatively thin media, in which resin migration is not a significant or a substantial problem.

The D1 reference provides no teaching of selection of a particular combination of components, to lead to a good resin distribution in a relatively thick media. Thus, the D1 reference is background only and does not provide direction for the construction of the thick media that is presently of concern in Applicant's arrangement, or for the selection of a particular combination of materials to provide the desired results.

The PCT examiner also raised an issue under Article 6 PCT, to the effect that certain of the claims were considered not clear, especially claims 1 and 19.

Claim 1 clearly states in the preamble that the process being claimed is one for preparing a separator having at least one glass media stage. The process is defined with respect to the step of including, as a glass fiber media stage in the separator, glass fiber media stage in accord with the definitions provided. Further definition is not required, in order for clarity with respect to the subject claimed. The subject claimed is a process for preparing a separator as stated, in which the process is conducted in a manner such that the provision of at least one media stage within the separator is in accord with the definition. Other steps involved in preparing the separator would be in accord with general practices, or other practices as chosen by the practitioner.

A similar observation is made with respect to claim 19.

A new abstract page is supplied to conform to that appearing on the publication page of the WIPO application, but the new Abstract is typed on a separate page as required by U.S. practice.

Applicant respectfully requests that the preliminary amendment described herein be entered into the record prior to calculation of the filing fee and prior to examination and consideration of the above-identified application.


If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicants' primary attorney-of record, Randall A. Hillson (Reg. No. 31,838), at (612) 336-4707.



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RAH/cjc